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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,861	06/19/2001	Mathew L. Sommers	GLO 2 0054	7250

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EXAMINER
HARPER, HOLLY R

ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/681,861	SOMMERS, MATHEW L.	
	Examiner	Art Unit	
	Holly R. Harper	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *17-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8 and 10-15* is/are rejected.

7)☒ Claim(s) *7,9 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1- 16, drawn to a light-emitting device classified in class 313, subclass 512.

   II. Claims 17-19, drawn to method of manufacturing, classified in class 445, subclass 24.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed could be made by another alternative process such as providing a frame with an uneven portions and positioning the phosphor embedded epoxy on the frame and then attaching the nitride compound on the phosphor.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Scott McCollister on November 27, 2002 a provisional election was made without traverse to prosecute the invention of I, claims 1-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims

17-19 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al. (USPN 5,998,925) hereinafter "Shimizu."

In regard to claim 1, the Shimizu reference discloses a light-emitting device comprised of a nitride compound semiconductor (Column 3, Lines 26-27) providing blue emission (Column 4, Line 64). A coating material made of phosphor and epoxy is used to surround the nitride compound (Column 16, Lines 54-60 and Figure 1). The frame includes an uneven surface (Figure 1, element 105). In the uneven part of the frame, the nitride compound and epoxy are located.

In regard to claims 2-4, the Shimizu reference discloses that the nitride compound contains GaN (Column 4, Line 53), a binary compound in group III.

In regard to claim 5, the Shimizu reference discloses that a GaN compound semiconductor is made by forming a layer of InGaN on a substrate (Column 13, Line 60). This is surrounded by the epoxy (Figure 1).

In regard to claim 6, the Shimizu reference discloses that the use of a sapphire substrate is preferable (Column 14, Lines 9-10).

In regard to claim 8, the Shimizu reference discloses that the fluorescent material absorbs light of a short wavelength (blue light) and emits light of a long wavelength (Column 6, Lines 20-24), meaning visible light.

In regard to claims 10 and 11, the Shimizu reference discloses a light-emitting device comprised of a nitride compound semiconductor (Column 3, Lines 26-27) providing blue emission (Column 4, Line 64). A coating material made of phosphor and epoxy is used to surround the nitride compound (Column 16, Lines 54-60 and Figure 1). The frame includes an uneven surface (Figure 1, element 105). In the uneven part of the frame, the nitride compound and epoxy are located. The fluorescent material absorbs light of a short wavelength (blue light) and emits light of a long wavelength (Column 6, Lines 20-24), meaning visible light.

In regard to claim 12, the Shimizu reference discloses the use of a phosphor that has two ranges of wavelengths. The range of the short wavelength being absorbed is 400 to 500 nm (Figure 3A) and the range of the long wavelength being emitted is 450 nm to 700 nm (Figure 3B).

In regard to claim 13, the Shimizu reference discloses a light-emitting device comprised of a nitride compound semiconductor (Column 3, Lines 26-27) providing blue emission (Column 4, Line 64). A nitride compound semiconductor is made by forming a layer of InGaN on a substrate (Column 13, Line 60). A coating material made of phosphor and epoxy is used to surround the nitride compound and substrate (Column 16, Lines 54-60 and Figure 1). The frame includes an uneven surface (Figure 1, element 105). In the uneven part of the frame, the nitride compound, substrate, and epoxy are located.

In regard to claim 14, the Shimizu reference discloses that the nitride compound contains GaN (Column 4, Line 53), a binary compound.

In regard to claim 15, the Shimizu reference discloses that the use of a sapphire substrate is preferable (Column 14, Lines 9-10).

Allowable Subject Matter

3. Claims 7, 9, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Harper whose telephone number is (703) 305-7908. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Holly Harper
Patent Examiner
Art Unit 2879

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